

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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First Named Inventor:

Philip D. Nguyen

Docket Number:

2003-IP-010380U1

Application Number:

10/691,319

Art Unit:

1792

Conf. Number:

5926

Filing Date:

October 22, 2003

Examiner:

Elena Tsoy Lightfoot

Title:

**Methods for Reducing Particulate Density and
Methods of Using Reduced-Density Particulates**

☒ Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

☒ This request is being filed with a notice of appeal.

☒ The review is request for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

I am the

☐ applicant / inventor

☐ assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed

☒ attorney or agent of record or acting under 37 CFR 1.34.

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October 21, 2010

UNITED STATES PATENT AND TRADEMARK OFFICE PRE-APPEAL BRIEF		
First Named Inventor: Philip D. Nguyen	Docket Number: 2003-IP-010380U1	
Application Number: 10/691,319	Art Unit: 1792	Conf. Number: 5926
Filing Date: October 22, 2003	Examiner: Elena Tsoy Lightfoot	
Title: Methods for Reducing Particulate Density and Methods of Using Reduced-Density Particulates		

PRE-APPEAL BRIEF REQUEST FOR REVIEW

The following Pre-Appeal Brief Request for Review ("Request") is being filed in accordance with the provisions set forth in the Official Gazette Notice of July 12, 2005 ("OG Notice"). Pursuant to the OG Notice, this Request is being filed concurrently with a Notice of Appeal and the applicable fee. Appellants respectfully request reconsideration of the application in light of the remarks set forth below.

REMARKS

The Advisory Action in this case dated August 31, 2010 did not withdraw the pending 35 U.S.C. § 103 rejections. Claims 18-19, 25, 28, 31-32, 35-36, 42, 45, 48-49, 65-66, 68-73, 75 and 77 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,381,864 to Nguyen *et al.* (hereinafter "*Nguyen*") in view of U.S. Patent No. 4,969,523 to Martin *et al.* (hereinafter "*Martin*"), further in view of U.S. Patent No. 4,493,875 to Beck *et al.* (hereinafter "*Beck*"). Applicants respectfully disagree.

In the present rejection, the Office Action states that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to have produced sand/SVDB particulate material that closely matches density of carrier liquids in Nguyen *et al.* '864 in view of *Martin* as composite particles having dense core particles coated with low density particles with the expectation of avoiding the settling problem, as taught by Beck *et al.*" (Final Office Action at 7). **However, Applicants assert that combining *Nguyen* and *Beck* renders the prior art unsatisfactory for its intended purpose.**

With respect to *Nguyen*, the invention is directed towards the use of a treating composition comprising a particulate blend. (See *Nguyen* Abstract). Specifically, *Nguyen* is directed towards addressing the need for "treating techniques wherein the particulate materials

used will both (a) prevent the migration of formation sand and fines and (b) provide high relative production rates.” (*Nguyen* at col. 4, ll. 41-44). The use in the prior art described in *Nguyen* of a single sized particulate involves a trade-off between using a large particulate and a small particulate. (*Nguyen* at col. 4, ll. 18-36). Large particulates provide high initial permeability but allow for the migration of formation fines into the proppant bed. *Id.* Small particulates prevent the migration of formation sand and fines but have relatively low permeabilities and therefore yield substantially reduced production rates. *Id.* The solution to using a single sized particulate as disclosed in *Nguyen* is the use of a particulate blend comprising a large particulate material and a small particulate material. (*Id.* at col. 7, ll. 29-37). The blend allows the individual particulates to form a pack in the formation that “ provides a high permeability flow path to the wellbore and [] prevent[s] the migration of formation sand and fines through the formation fractures.” (*Id.* at col. 13, ll. 18-34). Example 1 of *Nguyen* demonstrates the improved results obtained using a blend of particulates relative to samples of both relatively large particulates alone and relatively small particulates alone. (*Id.* at col. 18, l. 24 – col. 19, l. 11). Thus, the principle of operation of *Nguyen* clearly relies upon the inclusion of a blend of particulates, and the particulates of *Nguyen* would not be satisfactory for their intended purpose if only a single sized particulate were to be used as in the pending claims.

The Examiner has also argued that *Nguyen* can be used with a hardenable resin system and that such a system forms a coated particulate. (Final Office Action at 5). Applicants agree that *Nguyen* discloses the use of a hardenable resin system in an embodiment, but disagree that such a system results in a coated particulate. The Examiner’s main argument appears to be that a resin coated particulate would result in the adhesion of the various particles in the stream. (Final Office Action at 5-6). Further, the Examiner argues that “*Nguyen* teaches nowhere that the large particulate material and a small particulate material should be present separately from each other in a stream in the presence of the hardenable (adhesive) resin” (Final Office Action at 5). Applicants respectfully disagree with this argument. *Nguyen* discloses throughout its description that the large particulate material and the small particulate material should be separate. Specifically, *Nguyen* defines the “particulate blend” by stating that the “particulate blend comprises a large particulate material and a small particulate material.” *Nguyen*, col. 7, ll. 32-34. When discussing the use of an additional hardenable resin, *Nguyen* states that “the resin system can be (a) added to the treating composition at the well site, (b) included as a precoating on the individual particles of the particulate blend, . . .” *Nguyen*, col. 7, ll. 37-41. Thus, the hardenable resin can be coated on individual particles, which comprise both large and small particulates. In describing the hardenable resin, *Nguyen* states that “the

hardenable resin system will be included in the treating composition in an effective amount for consolidating the particulate blend to form a hard permeable mass within the subterranean zone being treated.” *Nguyen*, col. 10, ll. 41-45 (emphasis added). Thus, the particulates comprise a small particulate and a large particulate, even if coated with a hardenable resin, until they reach the subterranean zone being treated before they are consolidated. The further specific embodiments all describe the particulate blend as being consolidated within the zone of interest (e.g., the subterranean formation (*Nguyen*, col. 10, ll. 41-45), the formation fractures (*Nguyen*, col. 13, ll. 35-39), around a screening device (*Nguyen*, col. 15, ll. 7-13)). Applicants note that *Nguyen* does not describe a “composite particle” or that the small particulate material and the large particulate material ever adhere to one another prior to being placed in the specific zone of interest. Thus in contrast to the Examiner’s assertion, *Nguyen* does describe that the large particulate material and the small particulate material are present separately from each other in the stream before being placed in the zone of interest, even in the presence of a hardenable resin.

Applicants note that the Examiner’s arguments that the particles would adhere to one another does not contain a reference to a particular teaching in the cited prior art. It would appear that the Examiner is relying on inherency to argue that two resin coated particulates would adhere to form a coated particulate. However, simply having two resin coated particulates in a solution would not necessarily cause the two particulates to adhere—an interpretation that would further conflict with the express teachings of *Nguyen* for placing a particulate blend, rather than a composite particulate, into the formation. As stated by the Court of Appeals for the Federal Circuit “[t]o establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999); see also MPEP § 2112. Thus, the fact that two resin coated particulates may adhere in a treatment fluid is insufficient to inherently disclose a reduced-density, coated particulate.

In contrast to the teaching of a particulate blend in *Nguyen*, *Beck* is directed to a composite proppant formed by mixing core particles with adhesive and coating the core particles with hollow microparticles to adhere the microparticles to the coated core. (*Beck* at col. 2, l. 65 – col. 3, l. 7). These particles are cured to form a single sized particulate prior to being placed in a wellbore. *Id.* Thus, applying the teachings of *Beck* to the particulate blend of

Nguyen would result in the adhesion of the relatively small particulates to the relatively large particulates prior to being placed in the wellbore. In other words, the combined particulates would have a single size, which is contrary to the purpose and functionality of the particulate blend of *Nguyen*. It should therefore be clear that in forming a rejection based on a combination of *Nguyen* in view of *Beck*, the proposed modification renders the particulate blend, which would become agglomerated, unsatisfactory for its intended purpose. Thus, there is no suggestion or motivation to make the proposed modification. (See MPEP 2143.01(V)).

In response to the Applicants' statements, the Examiner has indicated that "one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references." Final Office Action at 5. Applicants specifically note that under MPEP §2143, Applicants are arguing against the ability to combine the references and not against the references individually. To the extent that *Nguyen* and *Beck* cannot be combined, the combination argued by the Examiner cannot be used to form a *prima facie* case of obviousness.

With regard to the remaining 35 U.S.C. § 103(a) rejections combining *Nguyen* and *Beck* with other references such as U.S. Patent No. 4,969,523 to Martin *et al.* (hereinafter "*Martin*"), U.S. Patent No. 5,585,524 to Sielcken *et al.* (hereinafter "*Sielcken*"), U.S. Patent No. 5,128,390 to Murphey *et al.* (hereinafter "*Murphey '390*"), U.S. Patent No. 4,665,988 to Murphey *et al.* (hereinafter "*Murphey '988*"), and U.S. Patent Application No. 2002/0048676 to McDaniel *et al.* (hereinafter "*McDaniel*"), Applicants assert that these rejections fail because they rely on the improper combination of *Nguyen* and *Beck*.

I. No Waiver

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art.

CONCLUSION

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same.

Applicants submit with this Pre-Appeal Brief Request for Review a fee for a Notice of Appeal in the amount of \$540.00. Applicants believe that no additional fees are due in association with this Request. Should the Commissioner deem that any fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefore, and direct that any additional fees be charged to McDermott Will & Emery's Deposit Account No. 500417, Order Number 086108-0157.

Respectfully submitted,

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